Re-balancing the excellence frameworks with *individualistic logic*

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Abstract

The analysis and assessment of business excellence is often associated with the discussion on the design and justification of the excellence measures and their dimensions. This paper re-visits the critical issues in assessing business excellence, and aims to explore the conceptual development on re-balancing the performance dimensions in view of a framework. Based on the synthesising of published literatures and case studies it reveals that the all the published excellence frameworks are based on the ***commonality logic;*** and it suggests to re-balancing them with the ***individualistic logic***. This concept has then been operationalized by constructing a new excellence framework named *world class diamond model*. Based on the surveyed data and by using *structural equation modelling* the re-balanced diamond model is tested and analysed in order to secure its theoretical validity. With the re-balanced framework, it stresses the critical importance of the *individualistic logic* in achieving business excellence. It also argues that the managerial implication of the *individualistic logic* lies in

the firm-specific and situation-sensitive practices of business excellence. The original contribution of the research is a conceptually re-balanced perspective towards the business excellence, suggesting a shift from the commonality logic towards the individualistic logic.

Key words: Business excellence, excellence framework, performance measure.

Paper type: Research paper

1. Introduction

To date, in order to compete more effectively in the increasingly challenging market, organisations are searching for excellence and staying in excellence as one of their dominant strategies (Asif et al. 2011; Brown 2013). However, not many know for sure which is the best way to achieve this goal. Even fewer can actually succeed on this journey. Part of the reason perhaps is that the managers lack the profound understanding on what really constitute the world class business excellence. Partly, perhaps, the business excellence models they use are not appropriate for their organisation's specific value-adding activities (Abdullah et al. 2012). Or, perhaps, the business excellence models developed and published so far may be theoretically obsolete in some ways. There could be many more fundamental research questions in theory as well as in practice (Dahlgaard-Park, 2008; Taticchi, *et al.* 2010).

Nevertheless, the global scale and the paramount imperatives of pursuing the organisational excellence around the world have been all too evident in the literatures. Since 1982 when Peters and Waterman published their seminal book *In Search of Excellence – Lessons from American's Best-Run Companies*, there have been relentless attempts to define and re-define the notion of business excellence (Watson, 2003; Dahlgaard and Dahlgaard-Park, 2006). Whilst, the last three decades have witnessed the growth of business excellence models published around the world (Dereli et al. 2011; Lo & Chai 2012; Tatticchi *et al*., 2010; Talwar, 2009), questions about on what basis those frameworks can be established have seldom been addressed. Discussions on the underlying theories behind the formulation process of those excellence models are also sparse. Many factors, principles

and characters have been compiled for the assessment of excellence, but few have been done on the validity of the excellence models themselves. This status-quo gives rise to the research gap where the theory that underlies those models needs to be examined; new or alternative theoretical perspectives for assessing business excellence could be and should be further explored.

Furthermore, evidently the whole concept of business excellence is not static in its long years of development path. Rather, it is dynamic and is evolving along with the ever-changing business environment. Inside this dynamism, one can observe three main factors that are continuously reshaping the course of research and practice in the field of pursuing business excellence.

- First, the very definition of 'business excellence' has been continuously modified and discussed to accommodate for the context of rapid changes in the global business environment (Brudan, 2010; Dahlgaard-Park and *et al*., 1998); it is likely that further new models and frameworks will continue to emerge.

- Second, there is a diverse body of excellence frameworks, sometimes inconsistent with one another(Dahlgaard-Park and Dahlgaard, 2007; Brudan 2010), all aiming at the *commonalities* of excellent organisations; whilst they are served as the benchmarks and best-practices, the concept of using common characteristics of excellence to achieve excellence has not been challenged.

- Third, there is an increasing demand for an evolved theoretical framework of business excellence that can capture the unique or even idiosyncratic characteristics of world class excellence, recognising that every truly world class organisation has something unique (Lu, 2011; Lu, *et al.*, 2011).

Those factors call for a renewal in the theory of business excellence in order to facilitate its attainment in practice more effectively. To this end, the **objectives of this paper** is therefore set to seek a better understanding of what might be the theoretical underpinning for the extant excellence frameworks, and to examine and challenge this underlying theory for its validity and efficacy; and to develop an

alternative theory that can be operationalized into a measurement framework for achieving business excellence.

The **methodological approach** used in this research takes an epistemological orientation (Collis and Hussey, 2009), where the theories are built on the basis of gaining knowledge of the existing world and explains the knowledge in the form of theories and developed conceptual notions. Hence, relevant key literatures are reviewed and synthesised to gain the knowledge and establish the theoretical basis followed by the development of a new theory that can complement the existing one to achieve more balanced perspectives. The theory is then operationalized into a proposed framework that can be applied in businesses for defining and assessing the organisational excellence. Brief real-world cases are observed and exemplified to provide the factual support for the reasoning and explanations. Furthermore, a survey instrument was designed and the subsequently quantified data collected through a 7-points Likert scale. Analysis using Confirmatory Factor Analysis (CFA) and Structural Equation Modelling (SEM) (Hoyle, 1995) are carried out to further validate the proposed framework.

2. Excellence models and their theoretical basis

The growth of business excellence models (Dahlgaard-Park et al. 2013; Dereli et al. 2011; Lo & Chai 2012) and the increasing managerial focus on developing business excellence have been phenomenal over the last three decades. Dahlgaard-Park and Dahlgaard undertook an insightful and critical review on some of the well-known excellence models and frameworks in order to understand the development over a 25-year period (Dahlgaard-Park et al. 2013; Dahlgaard-Park and Dahlgaard, 2007). There is, in fact, a bewildering array of measures and approaches in the field of business performance assessment. Some of them are specifically designed for business excellence assessment. Tatticchi et al (2010) completed an extensive literature review of over 6,600 journal articles on performance measurement and management (PMM) and performance measurement systems (PMS) over a period of 40 years, and demonstrated an accelerated increase in the citations to the subject. A

selected group of 25 PMS including the well-known BSC (Balanced Score Card) models were identified and analysed. Based on Talwar's recent work (Talwar, 2009) there are at least 94 business excellence models or frameworks being proposed, published and used in 77 different countries around the world. Some of those frameworks have already been widely applied, including Malcolm Baldrige National Quality Award (MBNQA), European Foundation for Quality Management's (EFQM) Business Excellence Model and Deming Prize model. The value and contribution brought about by the world-wide movements and campaigns on developing business excellence has also been undeniably significant and remarkable (Dahlgaard & Eskildsen, 1999; Dahlgaard-Park & Dahlgaard, 2006). Nevertheless, the abundance and diversity of the business excellence models in itself could also be a tell-tale sign of many unanswered theoretical problems.

The authors would like put forth a conceptual hypothesis that all business excellence models (or frameworks used interchangeably later) are based on a theory defined herewith as the 'commonality logic'. ***The commonality logic in the context of assessing business excellence means a reasoning and decision approach that is based on identifying and measuring against a set of common factors of business excellence.*** This logic suggests two points: 1) all excellent companies have a set of common characters; 2) any non-excellent company can become excellent one if it acquires those common factors. Those 'factors' are often referred to as in the forms of KPIs, success factors, principles, traits, characters, excellence measures and so on that are common to all excellent companies. We hereby define this underlying assumption as the '*commonality logic*'.

The evidences to support the hypothesis are fortunately readily available in the plethora of literatures. Peters and Waterman's (1982) work is regarded as a seminal contribution to the understanding of the ***common*** traits of the 'excellence' companies with the eight attributes of excellence defined. Hayes and Wheelwright (1984) provided a major sea-change to their connection between internal development and the evolution to 'external excellence', and provided the four ***common stages*** of excellence development. Schonberger (1986) picks up the same issues as Hayes and Wheelwright and coined the phrase World Class Manufacturing and in his follow-up book "World Class Manufacturing: The next decade" (Schonberger, 1996) described the 16 ***common principles*** that

underscored the importance of connecting customer-focus with employee-drive and data-based process performance. In the European Excellence Model there are clearly defined 5 enablers and 4 results (EFQM, 1999a,b) in what is called the 9 factors model. The 9 factors are to be assessed as the ***common*** dimensions of measures for excellence. The Baldrige Excellence Model sets up seven ***common*** categories of criteria for the organizational quality excellence (Lee, *et al.*, 2003; Pannirselvam and Ferguson, 2001), of which six of them are about the approach, deployment, learning, and integration (including: leadership, strategic planning, customer focus, information / analysis, workforce, and processes) and the seventh criterion is the business performance results. Xerox has defined excellence as being certified with a high score on six ***common*** excellence criteria (Fornari and Maszle, 2004). This fact finding can surely go on and on.

The only consistent feature of all the models being examined is that they appear to have identified and truly believed in a set of common dimensions (or categories) of excellence measures. If a company can score well on those dimensions, it will be regarded as an excellence company. The rationale is simply because that all other excellence companies appear to have those factors in common. That is basically what the commonality logic is in practice.

As early as in c. 300 BC, Greek Socratic philosopher Euclid of Megara put forth a thesis of *Common Notions* in his "Euclid's Elements Book 1" (Euclid *et al*., 2002). It states that "Things which equal the same thing also equal one another". This is perhaps the earliest commonality logic one can observe in the literature. Applying it in this research, one may understand that if companies which are equal to the excellence model also equal one another in the category of excellence. Hence, naturally and logically, people come to the conclusion that in order to equal to those companies in the elite of excellence, what one only need to do is to create the model – the "same thing" , and try to equal it. Arguably, that really appears to be the underlying theme of all extant excellence models.

Commonality logic obviously is a valid and powerful logic in many circumstances. Many other management theories are also largely based on this logic. The argument, however, is often revolved around the choices of the common factors or components. This is exactly what has happed to all those

diverse varieties of frameworks, some of which are very disagreeable with each other. Different frameworks have different choices of factors, structures, flows and measures, albeit one often sees a significant degree of overlaps in between.

3. The rationale of *Individualistic Logic*

However, The biggest fallacy of commonality logic, however, is its lack of *falsification* (Lakatos, 1978; Lakatos and Feyerabend, 1999). In other words, the conclusion drawn from the commonality logic alone may fail the falsification test, and hence the commonality logic as defined above is not a complete or sufficient logic to draw a valid conclusion in view of scientific methodology. A practical implication of this view could be that it is still possible to identify some excellent companies that do not necessarily meet all the conditions of common factors and yet they are extremely successful and can beat their competitors by long wayand other companies that do so may still struggling to become the excellent companies. Thus, a derived further hypothesis would be: to rely on the commonality logic alone is not a rigorous approach to evaluate business excellence. This hypothesis is to be tested immediately in the next section.

Also, the commonality logic can only deliver the ***necessary conditions*** but not the ***sufficient conditions*** to achieve the excellence. In fact, the only thing management would like to have in the end is a set of *sufficient conditions* that guarantee the attainment of excellence. *Necessary conditions* offer only the first step albeit critically important. The gap between the *necessary condition* and *sufficient condition* is, however, not common to all organisations. To fill the gap an alternative theory is required which addresses the individually specific conditions for excellence – we call it '*individualistic logic*'.

The ***individualistic logic*** in the context of assessing business excellence is defined by the authors as '***the theoretical reasoning approach that is based on the individually specific conditions that contribute and suffice the business excellence.***' It is worth noting that to have something different is by all means ubiquitous; but, having the unique practices that directly result in the market success and

excellence is quite another matter. With this definition and its impplication in the assessment of business excellence, a number of potential conceptual implications can be debated since not all will be rigorously testified in this paper:

- All excellence is a unique excellence, never a 'common excellence'.
- The details of a company's future attainment of excellence cannot be foreseen until unless it has been achieved, since they will be unique and new.
- To achieve excellence, companies should not just benchmarking on the best practices of others, but to cultivate personalised individual unique practices that suits the individual circumstance.
- Any individually developed unique practice, when proven beneficial for much wider circumstances; it becomes the general 'best practice', and will cease to be *unique* to others.
- The uniqueness or individuality plays equally if not more important role in achieving business excellence.

Today, world class organisations often owe their achievements and excellence to their individually specific unique practices (including unique strategies, unique business models, and unique operational processes) that fit to their specific business environment. Our research shows that all world class organizations became so by having something unique, something that they do differently from their competitors and as a result they bring about market success (Matias & Coelho 2011; Zairi & Alsughayir 2011). The literature world is replete with evidence of such uniqueness of world class companies such as Toyota, Zara, Dell, IKEA and so on (all those four companies are the Forbes 2012 top 25 most admired companies).

TOYOTA (Spear and Bowen, 2006) has created whole raft of what we call today the best practices of lean manufacturing system. These best practices such as JIT (just-in-time), TQM (total quality management), TPM(total preventive maintenance), Kamban, and so on were indeed the signature practices from within, not learned from outside. It was the Toyota's great success that brought the

world to learn what they do and regarded them as the 'best practice' – they are indeed Toyota's individuality.

ZARA (Arnold and D'Andrea, 2003) is a newly emerged global fashion retailer. Zara's uniqueness is that they did not follow the traditional retailers in which clothing design and manufacture were done before the market window begins. Zara does it its own way; they put 30-40% clothing design and raw material purchasing, 50- 65% of external manufacturing, and over 75% of internal manufacturing after the market windows started so that they can follow the fashion trends closely instead of betting on them.

Dell (Rangan and Bell, 1998) created its combined signature process and signature operation in "manufacturing to stock and assemble to order" to ensure that the customised products are delivered faster with the mass production prices ─ a distinct signature process that differentiate Dell's competitive edge, which is unique to Dell at the time of its first implementation.

IKEA (Denison and Lief, 2008) is a world leading furnishing company. Its uniqueness is a bundle of signature practices that creates the value by enabling customer's own value creating activities. It offers a brand new division of labour. If the customer agrees to take on certain key tasks traditionally done by manufacturers and retailers – assembly of products and their delivery to customer's home, then IKEA promise to deliver well-designed products at substantially lower price.

Our extended investigation to the top 10 companies of FORTUNE magazine found all of them have their unique ways of doing business, which forms the pivotal part of their excellence. It is, therefore, reasonable to conclude that any business excellence framework that is based only on the commonality logic may have a lot to miss out. What's frightening is that most (if not all) extant frameworks have no specific emphasis on this individualistic logic. Unfortunately the theoretical basis of business excellence models is almost entirely constructed on the commonality logic. This could become, or may have already become, an obsolescence or a shortfall of current theory in excellence. Whilst the most popular excellence frameworks, such as EFQM and Baldridge excellence model, have remained

fundamentally unchanged for a few decades, it might be the time to do some more radical re-think and renewal.

Arguably, some commonality logic based excellence frameworks do have the measurement dimensions that can accommodate individualistic logic based excellence in a sense that no measures appear to against it. But the frameworks do not specifically drive individualistic excellence emphatically; instead, they lead managers to benchmarking against the role models on those measures and to pursuing for the best-practices – a typical commonality thinking approach. By following the extant commonality logic based excellence frameworks, some part of the performance outcome of the individualistic excellence may be captured in the defined measurement items, but the measure is also constrained by the items and often fails to assess the whole individualistic approach. More fundamentally, the individualistic logic based excellence often means to break free from and compromise upon some of the measurement criteria in the commonality logic based excellence frameworks in order to achieve the truly distinctiveness. Thus, it is fair to argue that the extant excellence frameworks are neither theoretically representing nor practically facilitating the individualistic logic based excellence. The role of individualistic logic based excellence needs to be recognised anew and re-instated emphatically.

4. Re-balanced Framework

A theoretical logic is only great when it can be operationalized to render practical business benefits. The aforementioned individualistic logic can be operationalized into any appropriately balanced excellence frameworks by constructing a new dimension of measures into them. The World Class Diamond model (Lu *et al*. 2011) is taken here as a base to embed the individualistic logic, and to test the validity of the operationalization through CFA and SEM methods (see next section). The choice of the model is therefore not the centre piece of the research contribution. Hence, the discussion on the appropriateness of the other excellence dimensions in the model has been kept in a limited depth.

The focus, however, is on the issues of balancing the dimensions of measures that accommodate both the commonality logic and individualistic logic.

Insert Figure 1 here

Recognising the established excellence models and frameworks over the past three decades were developed to achieve the balanced measures of business excellence between financial and non-financial measures; between strategic and operational measures; between short-term and long-term measure; and between internal research/capability measures and external demand/results measures. All those balances are necessary and appropriate on their own rights. However, as discussed above, those balances cover all the measures that are captured by the commonality logic. The proposed operationalization of the individualistic logic suggests an additional balance between the commonality-logic-dominant measures and the individualistic-logic-dominant measures. This research is, therefore, an attempt to re-balance the already balanced views on business excellence.

Shown in figure 1 is the world class diamond model that has a construct called 'unique voice', representing the individualistic nature of excellence. From an organization's internal perspective, it represents the signature policies, processes and operations that characterize the brand or distinctive image of the organization in the eyes of its customers. Externally it represents the differentiated advantage the organization enjoys in the market place as a result. It should be noted that the concept of signature process is not new (Gratton & Ghoshal, 2005). The critical difference here is that the Unique Voice has two parts, internal and external. The internal one refers to the signature practice. The external one represents the favourable outcomes in the market place as the direct result of the signature practices.

The instatement of the 'unique voice' dimension operationalizes the individualistic logic, and makes the concept executable. Organisations using this framework will be driven to look specifically at and evaluate their signature practices in order to ascertain if the unique practices have indeed contributed to the business excellence. For many companies that are accustomed to benchmarking and imitating the best-practices, the framework opens a fresh new dimension of thought. Maybe, the unique

activities or process they practise are not the 'outliers' after all. One day, the internally cultivated unique practice could become the 'best-practice' for other to follow and learn from. The framework guides the organisation to develop the individualistic excellence that fit to their own business environment as importantly as they do on developing their strategic fit, operational excellence and capability to adapt. The list of detailed measures within the dimension of 'unique voice' may indeed vary significantly, but the logic remains the same.

After the operationalization of the individualist logic of the business excellence, the framework appears to be more rigorous in representing a number of balanced perspectives. First, the holistic view of business excellence has the commonality sphere as well as the individualistic sphere. The dimensions of operational excellence, strategic fit and capability to adapt constitute the commonality logic sphere; while the unique voice dimension constitutes the individualistic logic sphere. Second, the four dimensions of the framework, in fact, also represent a balanced coverage on some well-established school of thoughts in excellence:

- ***Operational Excellence*** represents the classical school of thought in excellence.
- ***Strategic fit*** represents the strategic school of thought in excellence.
- ***Capability to adapt*** represents the dynamic school of thoughts in excellence.
- ***Unique voice*** represents, as discussed extensively above, the individualistic school of thought in excellence.

Thus, it becomes clear that this re-balanced framework does represent the common traits as well as the unique characteristics of business excellence; address the prevailing dynamism in terms of the conceptual evolution; and also have a balanced cover on all the key measurement dimensions.

5. Framework Verification

5.1 Methodology

To verify the validity of the 'unique voice', which represents the individualistic logic, as a key dimension in the framework proposed above, we choose to use the well-established Confirmatory Factor Analysis (CFA) and Structured Equation Modelling (SEM). Essentially the CFA is a type of SEM that deals specifically with the measurement model (Spearman, 1904, 1927). The fundamental intent of factor analysis is to determine the number and the nature of the latent factors (the dimensions here). SEM is a statistical methodology that takes a confirmatory or hypothesis-testing approach to the analysis of a structural theory bearing on observed phenomenon. Typically, this theory represents the causal processes that generate observation on multiple variables (Bentler, 1988). It covers two procedures: (a) the causal processes under study are represented by a series of structural equations, and (b) that these structural relations can be modelled pictorially to enable a clearer conceptualization of the theory under study.

Shown in figure 4 (ignore the quantitative results for now), the rectangles represent the measurement *indicators*. The ovals represent the *latent variables*, also called *factors*. The small round shaped variables represent the measurement errors. The single-headed arrows indicate the regression weights or factor loadings; and the double-headed arrows indicate the covariance in between the factors. Notice that the single-headed arrow away from the factor means a *reflective relationship*; and towards the factor means the *formative relationship*. Hence, the model asserts that the business excellence is *formative* to the four dimensional factors; and each of the dimensional factors is *reflective* to the three measurement indicators. We can then put forth the following hypotheses:

- H1: Each dimension is a factor that can be reliably reflected by the observed indicators.
- H2: All the four measurement dimensions are positively related with each other.
- H3: Business excellence is a second-order formative construct composed of four dimensions: (a) operational excellence; (b) strategic fit; (c) capability to adapt; (d) unique voice.

The first hypothesis is proposed to test the validity of the dimensions; the second is to show the mutually supportive (not mutually exclusive) inter-connections of the dimensions; the third hypothesis tests the formative nature of the Business Excellence.

5.2 Data collection

The survey was carried out in a total population of 1522 people (not everyone was deemed suitable for sampling the data), involving 8 UK based and headquartered international organisations. All together 213 selected individual respondents answered the questionnaire. Every respondent was asked to complete a questionnaire that consists of 14 statements to be evaluated in a *Likert Scale* of 1 to 7 (1 being *strongly-disagree* and 7 being *strongly-agree*). The respondent population is a mixture of managers in different levels, from team-leader, line-managers, to senior managers and directors. The questionnaire statements are listed in the ***Appendix 1***. Each statement (or question) constitutes a measurement test that collects an observed measure. Although the data are collected from 8 different companies, this research makes no distinction in between different companies as it would require much bigger pool to conduct the test on different company groups. Also the hypotheses to be tested are not specific to any individual companies. Taking the entire respondent population as one group suits our purpose. The data had then been screened to ensure that it is *positive definite* in order to be analysed legitimately by the SEM software (Wothke, 2003). The consistency reliability of the data, which measures the degree to which responses are consistent across the items within a measure, has also been checked by using *Cronbach's Alpha*. The result for all scales showed sufficient degrees of reliability, with the *Alpha* value being 0.855 (based on standardised items being 0.877), which is above the benchmark value of 0.700.

5.3 Measurement model

We now consider a first-order CFA measurement model as shown in figure 2. In the model, all the rectangles represent the indicators; and the ovals represent the latent factors; and the rounds represent the unique variables such as errors. This model asserts that the three observed measures (indicators) for each dimensional depend on an unobserved variable factor which represents the dimensions of the business excellence. According to the concept of *reflective model*, every observation measure is determined by a relevant latent factor as an underlying variable. The model also postulates that the measures may also depend on something other than the latent factors, including measurement errors

and possible unknown factors. The four latent variables are called the common factors because each of them is common to a number of observed indicators, whilst the 'error' variables are the unique factors since they only effect on one observation. The model also assumes that the unique factors are uncorrelated with each other, nor with the latent factors.

Insert Figure 2. Here.

The path diagram models are created by using IBM SPSS Amos 20 software, which is one of the most widely used software for SEM and CFA. The parameter estimation was based on the *maximum likelihood* (ML) procedure. The *Goodness-of-fit* of the model was measured using *Comparative Fit Index* (CFI), albeit many dozens of fit measures are available from Amos. The factor loadings are calculated in *standardised* terms since the indicators are generally correlated with each other, whilst the *unstandardized* regression coefficients (also easily calculable in AMOS) are often reserved for comparing the results for the same predictors across different samples, which is not the case here. Scales through *unit loading identification* (the '1's in Figure 2) are assigned to all the error variables and latent factors as shown in figure 2. After loading the data into the created AMOS model and run the analysis, the first-order CFA then produced results.

The results show a good level of fit with the [CFI]=0.896; which is not quite but close enough to 0.90 as the benchmarking level indicating a reasonably good model fit (Bentler and Bonett, 1980). The χ^2 /[d.f.]= 117.60/48=2.45, discrepancy degrees of freedom ratio is also just below the 2.50 point as it is desired to be. The reliability of each indicator can be analysed through its squared multiple correlation (Jöreskog and Sörbom, 1982), suggested by AMOS. The values of the squared multiple correlations are shown on the top-right corner of each endogenous variable (see Figure 3). They determine the share of variance explained by the predictions of the endogenous variables. For example, 84% of the variance of the 'UV1' is explained by the factor *Unique Voice*. The values estimated by the model are clearly a substantial support to the four measurement dimensions which are reflective by the indicators. The standardised factor loading shown on each of the single-headed arrows in figure 2

demonstrate that the latent variables do determine substantively the observed indicators. With the reasonably confident fit of the model and the significant impact demonstrated by the high regression weights, we come to conclude that the existence and the validity of the four measurement constructs are beyond reasonable doubt. Hypothesis 1 has thus been tested positive.

5.4 Structural model

In contrast to the measurement model the structural part of the model represents the relationship between the latent factors (not the measurement indicators). Here we intend to verify the formative contribution made by 'unique voice' to business excellence is equally significant compare with the other three dimensions. Figure 3 shows the structural part of our model.

Many literatures appear to show that researchers often assume the relationships between constructs and their dimensions are reflective. It has been pointed out though that majority of the constructs, which are indeed *formative*, have been incorrectly modelled and analysed as the *reflective* constructs (Diamantopoulos & Siguaw 2006; Helm 2005). It is appropriate to design the structural equation model with the business excellence having a *formative relationship* at the second-order construct to its dimensions; and with the reflective relationships to their measurement indicators.

Insert Figure 3. Here.

According to the decision rules for determining whether a construct should be *formative* or *reflective* by Jarvis, MacKenzie and Podsakoff (2003), it become apparent that the second-order business excellence construct is *formative*, with the defined dimensional constructs of operational excellence, strategic fit, capability to adapt, and unique voice.

Changes in the dimensional performance (i.e. changes in *capability to adapt* and so on), therefore causes the changes in overall excellence performance. The performance in each of the constructive dimensions determines and forms the business excellence. This is also the way how practically the business excellence is evaluated, but not vice versa. More importantly, dropping any one of the first-

order dimensions alters or invalidates the conceptual domain of business excellence. Also, all the antecedents for each of the dimensional factors are likely to be different, leading to different configuration in measures and criteria across different businesses, as all organisations and their business have different characteristics. Therefore, the second-order business excellence construct has been modelled formatively.

SEM (using AMOS 20 again) was applied to analyse such relationships in the model. SEM is appropriate for complex, multivariate data and testing hypotheses regarding relationships among observed and latent variables (Hoyle 1995). In testing *formative* constructs, as within our model, there are two general causal modelling approaches (Fornell and Bookstein, 1982): the covariance-based methods, or the variance-based method, known as partial least squares (PLS). We applied the covariance-based methods (Chin, 1998; Haenlein & Kaplan, 2004) because our purpose is not theory generation, but rather confirming the theory. The combined measurement and structural model is shown in figure 4 with some of the analysis results attached.

Insert Figure 4. Here.

The results of the structural model analysis using the collected data have shown a reasonably acceptable overall fit. The AMOS programme has produced a raft of statistics figures, and some of the key statistics are: χ^2 of 156.66 and the degree of freedom [d.f.] of 67, which makes the χ^2 /[d.f.] = 2.34 (the benchmarking point is < 2.5); the comparative fit index [CFI]=0.93 (the benchmarking point is > 0.9); the root mean squared error of approximation [RMEA]= 0.06 (benchmarking point <0.1); Also very importantly, the significant (p<0.001) and positive formative relationship exist between the business excellence and the four dimensional factors, with the standardised estimates of 0.36, 0.46, 0.35, 0.23 respectively shown in figure 4. The contribution regression weight by the 'unique voice' is 0.23 in this case, significant enough to verify its formative contribution to the business excellence. This, along with the fit statistics of the overall model, provides support that business excellence is a second-order construct composed of the four dimensions. The hypotheses 2 and 3 have thus been positively tested.

6. Conclusion

This research has presented a compelling need for the renewed understanding of business excellence in today's and future's changing business environment. By investigating the extant excellence frameworks, it reveals that the underlying theoretical basis for all published frameworks and models is the *commonality logic*. Whilst the commonality logic works fine in many circumstances, it is argued that it may not quite fit for the purpose and may be due for a renewal. The concept of business excellence has thus been proffered to be re-defined by balancing the *commonality logic* with the *individualistic logic* in order to respond to the changing environment and to drive the business excellence more effectively. Evidences have been presented to ascertain the significant existence and contribution of the 'unique voice' to excellence through exemplifying cases. Thus, it becomes convincing that any effective excellence framework is better to have such balanced perspective.

This balanced concept has also been operationalized by constructing the 'unique voice' dimension of measures into the proposed framework to balance the other three dimensions. The four dimensional Diamond Model has been used to represent the dual-logic approach, i.e. combining the commonality logic with the individualistic logic. Based on the survey data, a structured equation model was created to test the concept and the result has been positive and consistent with a satisfactory statistical confidence-level. Empirical observation on typical excellence organisations provided the data for the quantitative analysis using CFA and SEM. The overall result shows that the *unique voice* constitutes, in an equal measure along with other dimensions, to the organisational excellence. The CFA leads to the conclusion that the four dimensional design fit to the observation appropriately. The four dimensions are positively related to each other, which can be partially demonstrated by the 6 positive covariances. The second-order SEM model gives further evidence for the appropriateness of the four dimensional structure. Each dimension of the business excellence model is therefore the substantive *formative factor* that have been convincingly supported by the analysis results.

In respect to the theoretical implication, it can be argued that there could be a serious risk of obsolescence associated with the extant excellence models if the significant balance from the

individualistic logic is ignored. The theories on the excellence and their measurement may have already fallen far behind the practices. In fact, the three major frameworks (EFQM model in 1989, Baldrige Quality model in 1987, Deming Prize model in 1951) used around world have been more than 25 years old, albeit the age on its own cannot be the evidence of shortcomings. However, this remains the subject that exposes constantly to the unrelenting dynamics in the business environment. To date, increasingly many cases of business excellence have been achieved primarily through the individualistic logic rather than through the commonality logic. Observing from the balanced perspective of the two logics, it becomes clearer that the popular approaches like benchmarking and best-practices can no longer be deemed as effective. Cultivating signature practices, developing organisational *unique voices* and creating blue ocean strategies ought to play increasingly more important role in achieving business excellence.

In regards to the practical implication, the re-balanced framework encourages and drives innovation and creativity. It endorses internally cultivated unique practices and prevents them from being snuffed out for just being 'not a done thing.' The individualistic logic favours the unique and profoundly distinctive business excellence that is achieved through the signature processes and activities which contribute the unique value rather than ticking the boxes of every performance criteria. The excellence measures that fit to the commonality logic should serve as the "market qualifier"; whist the excellence arisen from the individualistic logic may serve as the "market winner".

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Appendix. The survey questionnaire

Category		**Statement**	**Strongly Disagree to Strongly Agree**
Operational Excellence	OE1	Your organisation has high level of operational efficiency and effectiveness; cost has continuously optimised.	1 , 2 , 3 , 4 , 5 , 6 , 7
	OE2	There is a culture of relentless pursuit of perfection in operation, such as zero-defects and on-time delivery, and highest standard quality and service to customers	1 , 2 , 3 , 4 , 5 , 6 , 7
	OE3	Your organisation has applied lean manufacturing and lean logistics throughout.	1 , 2 , 3 , 4 , 5 , 6 , 7
Strategic Fit	SF1	Your organisation has set up the mission, vision and values from the top levels that provide the guidance for the strategy formulation.	1 , 2 , 3 , 4 , 5 , 6 , 7
	SF2	Your business strategy has ensured the best fit between market requirement and organisational internal resources.	1 , 2 , 3 , 4 , 5 , 6 , 7
	SF3	Your business strategy has ensured a most appropriate relationship fit in between buyers and suppliers in accordance to their strength and weakness.	1 , 2 , 3 , 4 , 5 , 6 , 7
Capability to Adapt	CA1	Your management is actively transforming its value-adding paradigm in order to meet the challenges of the changing business environment, e.g., moving towards 'green organisation' and 'ethical supply chain'.	1 , 2 , 3 , 4 , 5 , 6 , 7
	CA2	Your organisation is constantly making long-term investment decisions in updating technological capabilities in order to stay ahead of the tide of changing competitive market place.	1 , 2 , 3 , 4 , 5 , 6 , 7
	CA3	Your organisation has a structure and process ready to continuously train and develop people so that they can constantly migrate from one knowledge platform to another in order to adapt to the emerging business needs.	1 , 2 , 3 , 4 , 5 , 6 , 7
Unique Voice	UV1	Your management team understand the unique nature of the business and the specific business environment, and thus is able to manage it in a unique way that differentiates your success style from the competitors.	1 , 2 , 3 , 4 , 5 , 6 , 7
	UV2	Your organisation has been innovative in product and service design and delivery in order to satisfy the customer in an entirely new way	1 , 2 , 3 , 4 , 5 , 6 , 7
	UV3	Your organisation has developed internally cultivated signature processes that work the best in achieving business objectives.	1 , 2 , 3 , 4 , 5 , 6 , 7
World Class Excellence	WC1	Your organisation has been able to deliver excellent customer satisfaction in terms of high quality products and delightful services.	1 , 2 , 3 , 4 , 5 , 6 , 7
	WC2	Your organisation has been competing successfully in the market place, gaining global reputation, growing market share, and earning well above industrial average profit.	1 , 2 , 3 , 4 , 5 , 6 , 7

List of table of figures:

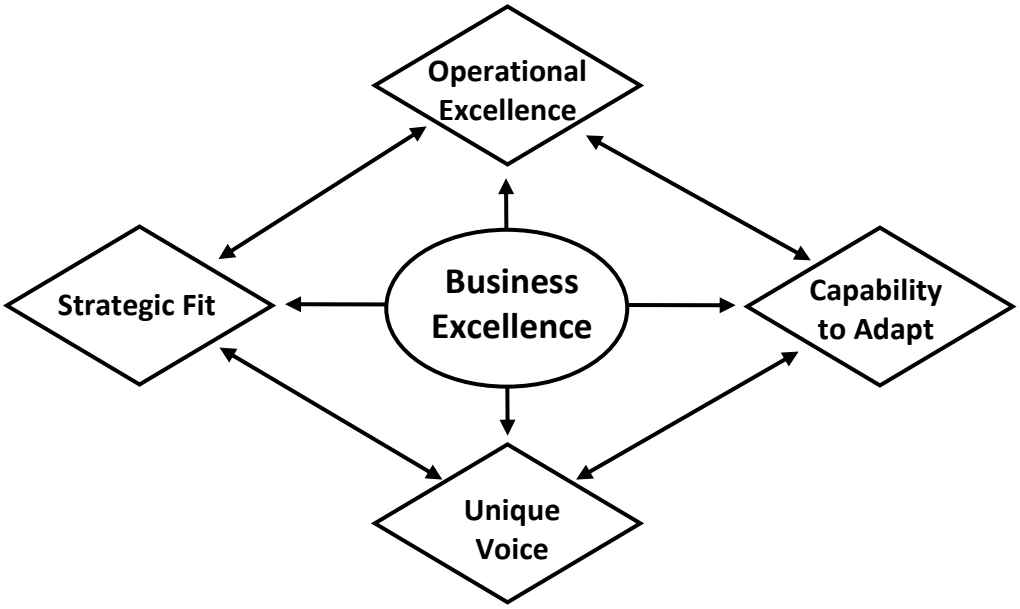

Figure 1– The World Class Diamond model©

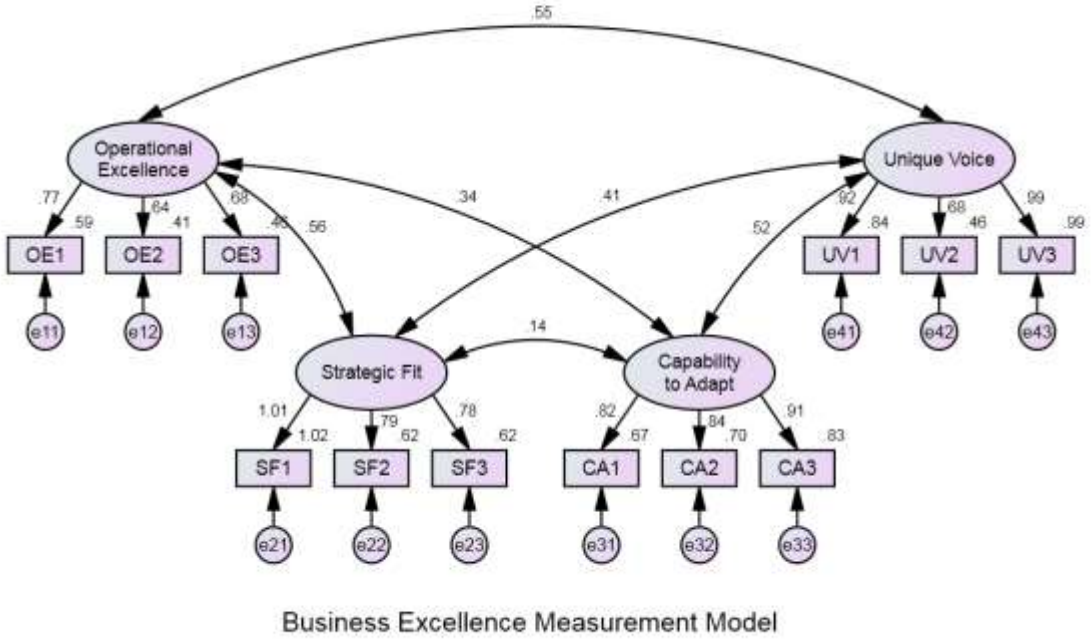

Figure 2. Supply chain performance measurement model with analysis results

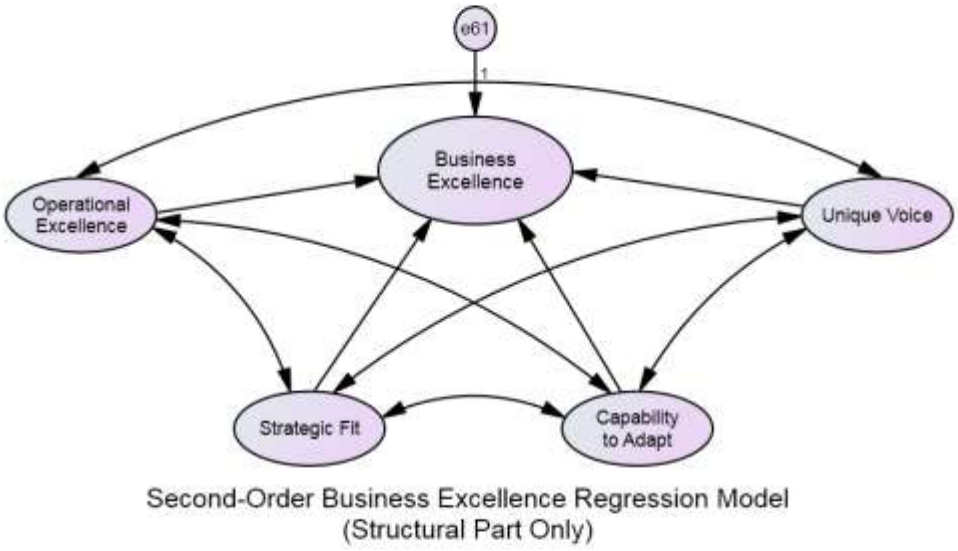

Figure 3. Structural part of the second-order supply chain performance regression model.

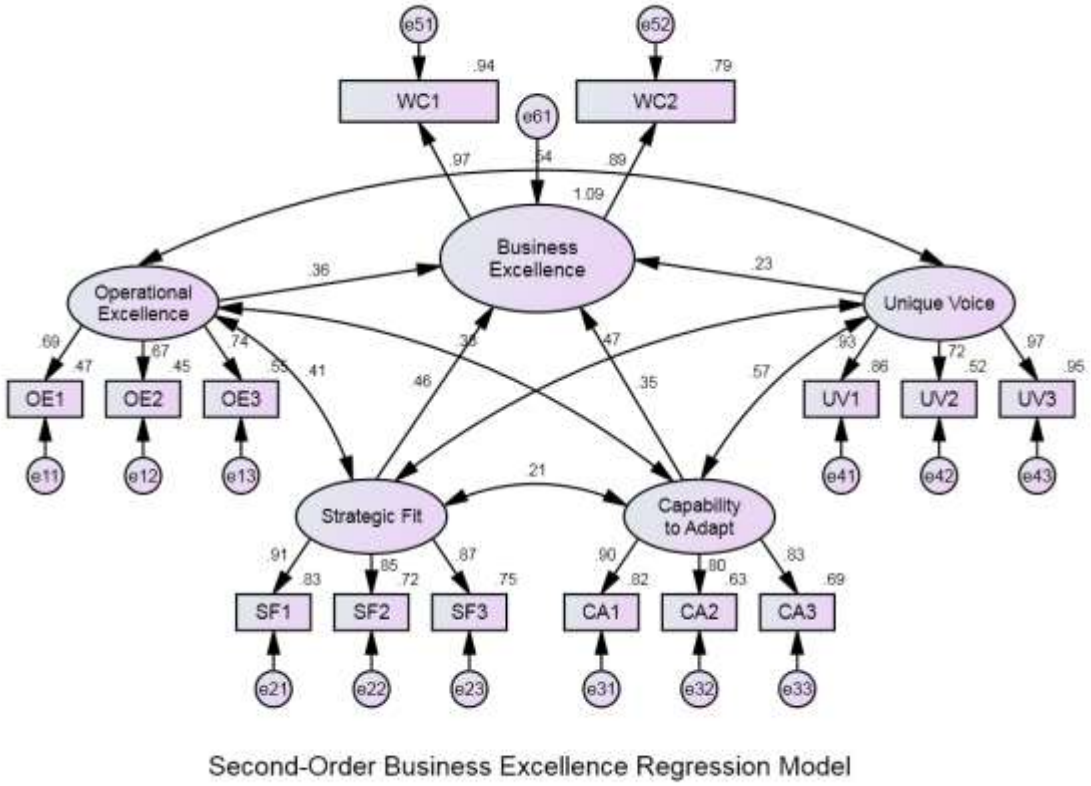

Figure 4. Second-order supply chain performance regression model with analysis results.